

A new species of Scincid Lizard from New Caledonia (Reptilia Lacertilia Scincidae)

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ABSTRACT

A new species of scincid lizard, known only from the holotype, is described from southern New Caledonia. In appearance it most closely resembles species of the endemic New Caledonian genus *Tropidoscincus* Bocage, 1873 but

lacks the key diagnostic features for inclusion in that or any other monophyletic New Caledonian genus. For this reason the new species is tentatively placed in the catchall genus *Leiolopisma* until further specimens become available for study.

RÉSUMÉ

Un nouveau scincidé, connu seulement par son holotype, est décrit du sud de la Nouvelle-Calédonie. Son habitus se rapproche beaucoup de celui du genre *Tropidoscincus* Bocage, 1873, endémique de Nouvelle-Calédonie. Cependant, ses caractéristiques ostéologiques et méristiques ne permet-

tent pas de l'y inclure, ni de l'attribuer à aucun autre genre monophylétique présent sur cette île. C'est pour cette raison que le taxon est placé dans le genre « fourre-tout » *Leiolopisma*, en attendant que des spécimens supplémentaires soient disponibles pour une étude plus détaillée.

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The reptile fauna of New Caledonia has in the last decade received more attention from herpetologists than any time since the pioneering publication of ROUX (1913) which comprised the first major synopsis of the New Caledonian herpetofauna. Aside from revising and extending our knowledge on the morphology and biology of known species (SADLIER, 1986; BAUER, 1986, 1987; BARTMANN & MINUTH, 1979; MEIER, 1979), a number of new and distinctive taxa known from only two or fewer individuals, and from generally restricted localities on the island (*Eugongylus haraldmeieri* Böhme, 1976; *Leiopolisma greeri* Böhme, 1979; *Graciliscincus shonae* Sadlier, 1986; *Nannoscincus rankini* Sadlier, 1986) have recently been discovered and described.

The new species described below, known only from the holotype, is yet another distinctive species with an apparently restricted distribution. In superficial appearance (keeled body scales, long hindlimbs and tail) it is similar to species of *Tropidoscincus* Bocage, 1873 but lacks the skeletal and scalation features diagnostic for that genus. The generally primitive morphology of this species with regard to characters that can confidently be assigned polarities does not allow ready alignment with any other New Caledonian species currently referred to *Leiopolisma* (Sadlier, 1986). A suite of scalation characters unique to it (within the context of the *Eugongylus* group of Greer, 1974 and 1979) which may latter prove useful in inferring relationships are the paired upper

secondary temporals bordering either parietal, and the strongly bicarinate nature of the keeling on the scales of the dorsal surface of the body and tail. More specimens are required to assess variation in these characters.

The recent efforts of malacologists from the Muséum national d'Histoire naturelle have greatly assisted the development of herpetology in New Caledonia, either by sharing their local knowledge with visiting herpetologists or by collecting reptile specimens in the course of their own field studies. In this paper we name the new species after Simon TILLIER for such assistance.

Leiopolisma tillieri n. sp.

(fig. 1-3)

Type material : holotype MNHN 1989.26 (juvenile), Rivière Bleue, maquis along the crest-line, 166°40'06" E, 22°06'05" S, 310 m, Malaise trap, 31.1-12.II.1987 (L. BONNET de LARBOGNE, J. CHAZEAU & A. & S. TILLIER).

Diagnosis : *Leiopolisma tillieri* is distinguished from all other New Caledonian members of the genus by the following combination of characters : tail long, 2.5 times the body length; frontoparietals fused; postnasal suture absent; tertiary temporals 2; 2 upper secondary temporals either side bordering the parietals; dorsal body scales strongly bicarinate.



FIG. 1. — MNHN 1989.26, holotype of *Leiopolisma tillieri* n. sp. (snout to vent length 29.5 mm; other dimensions in text).

Description : the description is based on a hatchling specimen (yolk scar evident on abdomen).

Measurements. Snout to vent length (SVL) 29.5 mm; axilla to groin length 49.1 % of SVL; hindlimb length 52.5 % of SVL; tail length 252.5 % of SVL.

Scalation. Frontonasal broader than long (w/L 127 %); prefrontals large, narrowly separated; frontal fused to frontoparietals; frontoparietals fused; interparietal distinct; parietals each bordered by a single nuchal and 2 upper secondary temporal scales; primary temporals 1; lower secondary temporals 1; tertiary temporals 2.

Nasals moderate-widely separated; 2 loreals, anterior as long as deep, posterior 1.5 – 2 × as long as deep; anterior subocular single, large; supraciliaries 7 on left, 6 on right (3rd and 4th fused); upper labials 7, with 5th subocular and contacting lower eyelid; postlabials 2; lower labials 6, with 1st and 2nd contacting postmental; chinshields 3, 1st pair in broad contact, and all contacting lower labials.

Lower eyelid with an obvious, centrally located semi-transparent disc, length 44 % of total eye length.

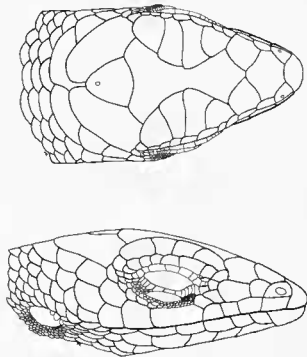


FIG. 2. — Lateral and dorsal views of the head of MNIN 1989.26, *Leiolopisma tillieri* n. sp.

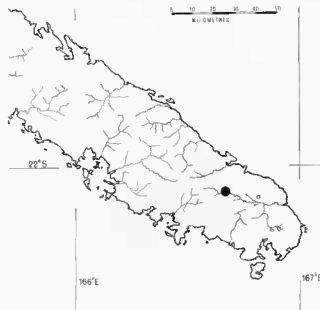


FIG. 3. — The type locality of *Leiolopisma tillieri* n. sp. (closed circle).

Body scales strongly bicarinate, number of keels increasing to 5 or 6 towards nape as scales progressively broaden; scales over tail strongly bicarinate; midbody scale rows 34; paravertebral scales 68.

Pentadactyl; hindlimbs with tricarinate scales; lamellae beneath fourth toe 31-34, broad and dark brown in colour.

Osteology. Presacral vertebrae 29; postsacral vertebrae 62+; 2 pairs of mesosternal ribs contacting the mesosternum.

Colour and pattern. Dorsal surface olive green with longitudinally aligned dark flecks on the vertebral and paravertebral regions. Upper lateral surface olive green anterior to forelimbs, posterior to forelimbs darkbrown-black with light brown flecks; a pale midlateral stripe extending from eye to groin, rough edged and only marginally defined from darker lower lateral surface; lower lateral surface grey with light and darker flecks. Ventral surface white.

Comparison with other species : in its current context *Leiolopisma* is an assemblage of primitive *Eugongylus* group species rather than a clearly defined lineage of related species. *L. tillieri* is readily identified from the type species *L. telfairi* from Mauritius and all Australian, New Zealand

TABLE 1. Comparison of features of body proportions, scalation and osteology between *Leiopisma tillieri* and the species of *Tropidoscincus* Bocage. Data for *Tropidoscincus* from Sadlier (1986), numbers rounded off.

CHARACTER	SPECIES			
	<i>L. tillieri</i>	<i>T. aubrianus</i>	<i>T. rohssii</i>	<i>T. variabilis</i>
Tail length (% SVL)	252 %	180.4 %	259 %	240 %
Hindlimb length (% SVL)				
range	52 %	48-53 %	54-64 %	54-67 %
(mean)	—	(50 %)	(58 %)	(58 %)
Postnasal groove	absent	present	present	present
Upper labials				
— range	7	8-9	7-9	7-9
(mode)	—	(8)	(8)	(8)
Upper secondary temporals	2	1	1	1
Midbody scale rows				
range	34	32-34	36-40	36-40
(mean)	—	(33)	(37)	(37)
Paravertebral scale rows				
— range	68	58-62	49-56	49-58
(mean)	—	(60)	(53)	(53)
Lamellae of 4th toe				
range	31-34	32-41	34-46	36-48
(mean)	—	(37)	(39)	(41)
Postsaeral vertebrae	62+	59-60	60-62	60-62
Mesosternal ribs	2	3	3	3

and Fijian species still included in *Leiopisma* by the markedly bicarinate nature of the scales on the body and tail. Comparing *L. tillieri* with other New Caledonian scincid lizards there is an obvious superficial similarity with species of *Tropidoscincus* Bocage, 1873 (see Table 1). The three species *T. variabilis*, *T. rohssii* and *T. aubrianus* are surface active; the first two species in particular share similar body proportions to *L. tillieri*. The extreme tail length of the species of *Tropidoscincus* and *L. tillieri* is the only character which in combination with fused frontoparietals, supranasals absent (although a prominent postnasal suture is present in *Tropidoscincus*), lower eyelid with a centrally located

semitransparent disc, and ear lobules moderately small, may serve to identify these species as a natural group with *L. tillieri* the sister group to *Tropidoscincus*.

Ecological notes : the holotype was collected in February 1987 with a Malaise trap, designed to catch flying insects, about the same height as the surrounding vegetation. The latter consists in bushes with a few scattered *Agathis montana*; although secondarized under the effect of fires, it is probably close in floristic composition to the primary maquis which once covered large areas in southern New Caledonia.

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REFERENCES

- BARTMANN, W. & MINUTH, E., 1979. — Ein lebend-gebarender Gecko, *Rhacodactylus trachyrhynchus* Bocage, 1873 aus Neukaledonien (Reptilia : Sauria : Gekkonidae). *Salamandra*, **15** : 58-60.
- BAUER, A. M., 1985. — Notes on the taxonomy, morphology and behaviour of *Rhacodactylus chahoua* (Bavay) (Reptilia : Gekkonidae). *Bonn. Zool. Beitr.*, **36** : 81-94.
- BAUER, A. M., 1987. — Note on Geographic Distribution : Serpentes : *Ramphotyphlops braminus*. *Herp. Review*, **18** (2) : 41.
- GREER, A. E., 1974. — The generic relationships of the scincid genus *Leiopisma* and its relatives. *Aust. Journal of Zoology* - Supplementary series, **31** : 1-67.
- GREER, A. E., 1979. — A phylogenetic subdivision of Australian skinks. *Rec. Aust. Mus.*, **32** (8) : 339-371.
- MEIER, H., 1979. — Herpetologische Beobachtungen auf Neukaledonien. *Salamandra*, **15** : 113-139.
- ROUX, J., 1913. — Les reptiles de la Nouvelle-Calédonie et des îles Loyalty. In F. SARAZIN & J. ROUX, Nova Caledonia, *Recherches scientifiques en Nouvelle-Calédonie et aux îles Loyalty*, (A), Zoologie. Wiesbaden, C. W. Kreidel's Verlag : 78-160.
- SADLER, R. A., 1986. — A Review of the Scincid Lizards of New Caledonia. *Rec. Aust. Mus.*, **39** (1) : 1-66.